CLAIMS

What is claimed is:

1. A system comprising:

a non-volatile data storage device, configure as one or more storage regions, to store one or more bytes of data;

a program store to store one or more processor-readable instructions to ascertain the validity of the data stored in the non-volatile storage device and if invalid to replace the data with an earlier stored valid image of the data; and

a processing unit couple to the storage device and program store, to read and process the one or more instructions in the process store.

2. The system of claim 1 wherein the processing unit processes the instructions in the program store as part of its start-up procedure.

3. The system of claim 1 wherein the data stored in the non-volatile data store is the Basic Input Output System (BIOS) for a processing device.

4. The system of claim 1 wherein the processor-readable instructions in the program store ascertain the validity of the data stored in the non-volatile storage device on a region by region basis.

5. The system of claim 1 wherein the earlier stored valid image of the data is stored in a location that cannot be modified without system authorization.

6. The system of claim 5 wherein system authorization includes

employing a system interface to perform modifications to the data stored in the non-volatile data storage device.

7. The system of claim 1 wherein ascertaining the validity of the data stored in the non-volatile storage device includes

determining if the current data in the non-volatile storage device is different than the earlier stored valid image of the data.

8. The system of claim 1 wherein ascertaining the validity of the data stored in the non-volatile storage device includes

determining if an integrity metric corresponding to the current data in the non-volatile storage device is different than the same integrity metric corresponding to the earlier stored valid image of the data.

9. The system of claim 1 further comprising:

generating a copy the current data in the non-volatile storage device if an authorized application modifies the current data; and

storing the copy as a valid image of the current data.

10. A method comprising:

reading the content currently stored in a non-volatile storage device;

determining if the current content has been modified without authorization; and

replacing the current content with a previously stored valid image of the content if the current content is determined to have been modified without authorization.

11. The method of claim 10 further comprising:

reading the image of the previously stored content; and

comparing the previously stored content to the current content to determine if the current content has been modified.

12. The method of claim 10 wherein determining if the current content has been modified without authorization includes

comparing a previously stored checksum, corresponding to the valid image of the previously stored content, and the checksum corresponding to the current content.

13. The method of claim 10 wherein determining if the current content has been modified without authorization includes

comparing a previously stored cyclic redundancy check value, corresponding to the valid image of the previously stored content, and the cyclic redundancy check value corresponding to the current content.

14. The method of claim 10 wherein determining if the current content has been modified without authorization includes

comparing a previously stored bit mask, corresponding to the valid image of previously stored content, and the corresponding bits of the current content.

15. The method of claim 10 further comprising:

storing a valid image of the current content for later use.

16. The method of claim 10 wherein the content is read from the non-volatile storage device as part of a start-up procedure.

17. A method comprising:

arranging a non-volatile storage device into one or more storage regions;

generating an integrity metric corresponding to the valid content stored in a first region of the non-volatile storage device; and storing the integrity metric to later determine if the content in the first region has been modified without authorization.

18. The method of claim 17 further comprising:

comparing a previously stored integrity metric, corresponding to an earlier version of the content stored in the first region, to a newly calculated integrity metric corresponding to the current content stored in the first region to determine if an unauthorized modification has occurred.

19. The method of claim 17 further comprising:

replacing the first region with an earlier version of the content therein if it is determined that there was an unauthorized modification.

20. A method comprising:

arranging a non-volatile storage device into one or more storage regions; and

comparing the current content in the first region to an earlier stored image of the content in the first region; and

replacing the current content stored in the first region with the previously stored content of the first region if it is determined that there was an unauthorized modification of the current content.

21. The method of claim 20 wherein the method is implemented as part of a start-up procedure.

22. The method of claim 20 wherein the non-volatile device is arranged into one or more logical regions, each region of one or more bytes.

23. A method comprising:

arranging a non-volatile storage device into one or more storage regions;

verifying that the content in the non-volatile storage device is valid; and

encrypting the content in a first region by use a first encryption key to protect it from unauthorized access.

24. The method of claim 23 further comprising:

protecting the content of the first region from unauthorized modification by use of an integrity metric.

25. The method of claim 23 further comprising:

protecting the content of the content of a second region with a second encryption key.

26. A machine-readable medium having one or more instructions secure content in a non-volatile storage device against unauthorized use, which when executed by a processor, causes the processor to perform operations comprising:

reading the content currently stored in a non-volatile storage device;

determining if the current content has been modified without authorization; and

replacing the current content with a previously stored image of the content if the current content is determined to have been modified without authorization.

27. The machine-readable medium of claim 26 wherein determining if the current content has been modified without authorization includes

reading an image of previously stored content; and

comparing the previously stored content to the current content to determine if the current content has been modified.

28. The machine-readable medium of claim 26 wherein determining if the current content has been modified without authorization includes

comparing a previously stored checksum corresponding to a valid image of previously stored content and the checksum corresponding to the current content.

29. The machine-readable medium of claim 26 wherein determining if the current content has been modified without authorization includes

comparing a previously stored cyclic redundancy check value corresponding to a valid image of previously stored content and the cyclic redundancy check value corresponding to the current content.

30. The machine-readable medium of claim 26 wherein determining if the current content has been modified without authorization includes

comparing a previously stored bit mask corresponding to a valid image of previously stored content and the corresponding bits of the current content.